



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,655	05/16/2001	Lawrence O'Gorman	264/243	1011

30423 7590 07/12/2004
STMICROELECTRONICS, INC.
MAIL STATION 2346
1310 ELECTRONICS DRIVE
CARROLLTON, TX 75006

EXAMINER

AHMED, SAMIR ANWAR

ART UNIT	PAPER NUMBER
----------	--------------

2623

DATE MAILED: 07/12/2004

18

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/681,655

Applicant(s)

O'GORMAN ET AL.

Examiner

Samir A. Ahmed

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 4, 7, 10 and 12-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-6, 8-9, 11, 21-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2623

1. The amendment filed 6/04/04 have been entered and made of record.
2. In response to applicant's amendment filed 6/04/04 the objection to the drawings is withdrawn.
3. In response to applicant's amendment filed 6/04/04 the objection to the specification is withdrawn.
4. Applicant's arguments filed 6/04/04 have been fully considered but they are not persuasive with regard to claims 1, 22, for the following reasons:

Applicant alleges, " amended claim 1 and new claim 22 recite a rounded, cup-shaped upper region [.] " (page 11, line 5-page 12, line 2). The Examiner disagrees. Firstly, the limitation "the finger contour area having a rounded, cup-shaped upper region" is not recited any where in the specification as originally filed. While the specification as originally filed recites that the fingertip contour 113 is rounded or concave as shown in Figs. 1A-1D, the specification has never recited any particular shape for the fingertip contour 113, and definitely not a "rounded, cup-shaped upper region". Furthermore, as shown in Figs 1B and 1C of the specification, the rounded shaped fingertip contour 113 is one region that starts from the bottom of the access piece 110 to its top, and definitely there is no cup-shaped upper region for that rounded part. Secondly, flange 13, of Amano reference is clearly rounded to receive the finger 12 as shown in Fig. 1 B and as shown in Fig 2B the fingertip of finger 13 rests on flange 13 and fits in it under the upper tip of flange 13, which broadly reads on the claim as enabled by the original specification.

Art Unit: 2623

Applicant alleges, " new claim 23 contains the limitation that the spring member is in the same plane and in line with the movable member itself [,]" (page 12, lines 4-24). The Examiner disagrees. Firstly, this limitation and the advantages of this limitation recited on page 12, lines 4-9 of the amendment is not recited any where in the specification as originally filed. The specification as originally filed merely recites on page 5 paragraph [0027], "one exemplary spring configuration is shown in Fig. 1 E. the spring 180 is a coil spring with elongated ends, each end having a hook. At one end, the spring 180 is hooked to a coupling protrusion 181 on the access piece 110. the other end is hooked to the enclosure 100 at an aperture 183. when the spring 180 is relaxed (that is, not under tension), the access piece 110 is closed". There is no recitation any where in the specification as originally filed that the spring member is in the same plane and in line with movable member to provide high degree of reliability for long-term operation as well as to ensure that the slide 110 always returns to the correct position without jamming or breakage. Secondly, Fig. 1 E that the Applicant is using for support for these features is a plan view of the device (a top or horizontal view of the device, that projects a drawing or diagram drawn to the horizontal plane). Plans as shown by their definition do not show differences in height. As shown in Fig. 1 E all details of the device such as enclosure 100, access piece 110, spring 100, protrusion 181, aperture 183, locating pin 187, and fastening holes 185, 189 are shown at the same level (the horizontal plane). While it is known from the cross sectional elevation view of the device in Figs 1 B and 1 C, that access piece 110 is at a higher plane than enclosure 100. Also

locating pin 187 is physically at higher plane than fastening holes 185, 189. Fig. 1 E is inconclusive for teaching these limitations.

Applicant alleges, " A further patentable feature is the location of the switch 160 [,]" (page 12, line 25-page 13, line 14). The Examiner disagrees. There is no recitation any where in the specification as originally filed that the switch 160 is a simple micro button which is depressed mechanically by the interaction of the slide 110 as it passes over the button 160. The specification as originally filed merely recites on page 6 paragraph [0029], "the switch 160 is positioned relative to the access piece 110 so that the access piece 110 engages the switch when the user slides the access piece 110, to access the sensor".

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-3, 5-6, 21-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1, recites "the finger contour area having a rounded, cup-shaped upper region", lines 9-10. The limitation "the finger contour area having a rounded, cup-shaped upper region" is not recited any where in the specification as originally filed. While the

Art Unit: 2623

specification as originally filed recites that the fingertip contour 113 is rounded or concave as shown in Figs. 1A-1D, the specification has never recited any particular shape for the fingertip contour 113, and definitely not a "rounded, cup-shaped upper region". Furthermore, as shown in Figs 1B and 1C of the specification, the rounded shaped fingertip contour 113 is one region that starts from the bottom of the access piece 110 to its top, and definitely there is no cup-shaped upper region for that rounded part.

As to claims 2-3, 5-6, 21-22, refer to claim 1 rejection.

Claim 23, recites " the spring being coupled to a rear wall portion of the movable access piece and aligned in the same plane as the movable access piece so as to apply direct force to the movable access piece in the same line of force as movement of the movable piece", lines 2-5. The limitation "the spring being aligned in the same plane as the movable access piece so as to apply direct force to the movable access piece in the same line of force as movement of the movable piece" is not recited any where in the specification as originally filed. The specification as originally filed merely recites on page 5 paragraph [0027], "one exemplary spring configuration is shown in Fig. 1 E. the spring 180 is a coil spring with elongated ends, each end having a hook. At one end, the spring 180 is hooked to a coupling protrusion 181 on the access piece 110. the other end is hooked to the enclosure 100 at an aperture 183. when the spring 180 is relaxed (that is, not under tension), the access piece 110 is closed". There is no recitation any where in the specification as originally filed that the spring member is in the same plane and in line with the movable access piece. Secondly, Fig. 1 E, the Applicant is using for

support for these features is a plan view of the device (a top or horizontal view of the device, that projects a drawing or diagram drawn to the horizontal plane). Plans as shown by their definition do not show differences in height. As shown in Fig. 1 E all details of the device such as enclosure 100, access piece 110, spring 100, protrusion 181, aperture 183, locating pin 187, and fastening holes 185, 189 are shown at the same level (the horizontal plane). While it is known from the cross sectional elevation view of the device in Figs 1 B and 1 C, that access piece 110 is at a higher plane than enclosure 100. Also locating pin 187 is physically at higher plane than fastening holes 185, 189. Fig. 1 E is inconclusive for teaching these limitations.

Claim 24, recites "the sensing circuit to be enabled upon tripping of the activation switch", line 3. The limitation "the sensing circuit to be enabled upon tripping of the activation switch" is not recited any where in the specification as originally filed. The specification as originally filed merely recites on page 6 paragraph [0029], "the switch 160 operates to switch power to the sensor on and off. The switch 160 is positioned relative to the access piece 110 so that the access piece 110 engages the switch when the user slides the access piece 110, to access the sensor".

Drawings

7. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, "the finger contour area having a rounded, cup-shaped upper region", the spring being coupled to a rear wall portion of the movable access piece and aligned in the same plane as the movable access piece so as to apply direct force to the movable access piece in the same line of

force as movement of the movable piece" and "the sensing circuit to be enabled upon tripping of the activation switch" (see paragraph 6 above), must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 6 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6, recites "configured to receive a fingertip" on line 3. Claim 1, that claim 6 depends from, recites "of a fingertip" on line 11. It is not clear whether "a fingertip" on line 3 is the same or different from "a fingertip" on line 11.

10. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 6 recites the broad recitation "wherein the movable access piece has a first end and a second end, the first end having a concave surface portion configured to receive a fingertip" on lines 1-3, and the claim also recites "a fingertip contour area located on a forward portion of the access piece, the finger contour area having a rounded, cup-shaped upper region configured to receive thereon a rounded tip portion of a fingertip" on lines 9-11 of claim 1, that claim 6 depends from, which is the narrower statement of the range/limitation.

Art Unit: 2623

11. Claim 24 recites the limitation "the sensing circuit " in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1-2, 5-6, 21, 22, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Salatino et al. (US Patent 5,920,640), Kazuaki Date (Japanese Patent Publication 64-65676) and Tadashi Amano (Japanese Patent Publication 4-88586).

As to claim 1 [as best understood by the Examiner], Salatino discloses an enclosure assembly for a fingerprint sensor (sensor 30 in Fig. 1 includes a housing or package 51 also col. 5, lines 37-39), the enclosure assembly comprising:

a stationary member including at least two substantially parallel sidewalls, the sidewalls partially defining a cavity in which the fingerprint sensor is disposed [Fig. 1, package 51 includes the fingerprint sensor 30;

a moveable access piece, which has a surface area larger than the surface area of the fingerprint sensor, the moveable access piece having a conductive portion electrically coupled to ground, wherein the moveable access piece is configured to move relative to the stationary member [a movable electrically conductive cover 53' for covering the opening to the exposed upper dielectric layer 52 of the fingerprint sensor.

Art Unit: 2623

The cover 53' is connected to an earth ground. A charge would be bled from the finger as the cover 53' is moved to expose the sensing portion of the sensor 30 (col. 7, lines 23-38, Fig. 4). Salatino discloses a movement apparatus configured to allow motion of the moveable access piece relative to the stationary member so as to expose the fingerprint sensor [cover 53' (the moveable access piece) is slidably connected to the package 51 (the stationary member) (col. 7, lines 31-34). The cover 53' is moved by the finger to expose the sensing portion of the sensor 30 (col. 7, lines 36-38).

Salatino does not explicitly disclose,

a movement apparatus configured to maintain the moveable access piece in a position covering the fingerprint sensor.

Date discloses a fingerprint input device, wherein the transparent body 2 of the fingerprint sensor is usually covered with the protection cover 1, and at the time of impressing a finger print, the cover 1 is slid with a finger 3 in an arrow F direction expose the transparent body 2. A spring 14 (movement apparatus) energizes a spring guide 10 fitted to the cover 1 in the closing direction to maintain the cover 1 (the moveable access piece) in a position covering the transparent body 2 of the fingerprint sensor (Abstract, Fig. 1). It would have been obvious to one with ordinary skill in the art at the time the invention was made to use the teaching of Date to modify the enclosure assembly of Salatino by using a spring (movement apparatus) fitted to maintain the cover (the moveable access piece) in a position covering the fingerprint sensor in order to protect the fingerprint sensor surface from being made dirty or damaged.

Neither Salatino nor Date discloses, a fingertip contour area located on a forward portion of the access piece, the finger contour area having a rounded, cup-shaped upper region configured to receive thereon a rounded tip portion of a fingertip".

Amano discloses a fingerprint device wherein a covering means to be slidable in the inserting direction of the finger and to cover the sensors contact surface when the finger is not in contact with the sensor (Abstract). The flange part 13 (a fingertip contour area located on a forward portion of the slidable cover) of the slidable cover pushed by the tip of the finger 12 is clearly rounded to receive the finger 12 as shown in Fig. 1 B. As shown in Fig 2B the fingertip of finger 13 which is rounded rests on flange 13 and fits in it under the upper tip of flange 13, i.e., configured to receive thereon a rounded tip portion of a fingertip. It would have been obvious to one with ordinary skill in the art at the time the invention was made to use the teaching of Amano to modify the combined enclosure assembly of Salatino and Date by using a slidable cover with a fingertip contour area having a rounded shape in order to protect the fingerprint sensor surface from being made dirty or damaged.

As to claims 2, 5-6, refer to claim 2, 5-6, grounds for rejections stated in paragraphs 10, 12 of the Office Action mailed on 4/19/02 paper number 6, are incorporated by reference herein.

As to claim 21, Amano further discloses, wherein the fingertip contour area is positioned in a location to align the core of the fingerprint area with the sensor when the access piece is moved to an open position [Fig. 2 B shows the fingertip contour area 13

Art Unit: 2623

is positioned in a location such that the core of the fingerprint of finger 12 is positioned on surface 11a and is aligned with camera 15 (sensor) that captures the fingerprint.

As to claim 22 [as best understood by the Examiner], refer to claim 21 rejection.

As to claim 24, Amano further discloses, further including an activation switch positioned adjacent to the movable access piece, the activation switch causing the sensing circuit to be enabled upon tripping of the activation switch, the activation switch being stationary relative to the movable member [Fig. 4 A, switch 37 is a stationary activation switch adjacent to the movable access piece 33. Fig. 4 B, the movable access piece 33 engages the activation switch 37, to turn on camera 35 (sensor).

14. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salatino et al. (US Patent 5,920,640) in view of Kazuaki Date (Japanese Patent Publication 64-65676). The grounds for rejections stated in paragraph 10 of the Office Action mailed on 4/19/02 paper number 6, are incorporated by reference herein.

As to claims 8-9, refer to claim 8-9, grounds for rejections stated in paragraph 10 of the Office Action mailed on 4/19/02 paper number 6, are incorporated by reference herein.

15. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Salatino et al. (US Patent 5,920,640), Kazuaki Date (Japanese Patent Publication 64-65676) and Tadashi Amano (Japanese Patent Publication 4-88586) as applied to claim 2, above and further in view of Thomopoulos et al. (US Patent 5,978,495).

As to claim 3, refer to claim 3 grounds for rejections stated in paragraph 11 of the Office Action mailed on 4/19/02 paper number 6, are incorporated by reference herein.

16. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Salatino et al. (US Patent 5,920,640) in view of Kazuaki Date (Japanese Patent Publication 64-65676) as applied to claims 8 above and further in view of Thomopoulos et al. (US Patent 5,978,495). The grounds for rejections stated in paragraph 11 of the Office Action mailed on 4/19/02 paper number 6, are incorporated by reference herein.

As to claim 11, refer to claim 11 grounds for rejections stated in paragraph 11 of the Office Action mailed on 4/19/02 paper number 6, are incorporated by reference herein.

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samir A. Ahmed whose telephone number is 703-305-9870. The examiner can normally be reached on Mon-Fri 8:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703-308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SA



**SAMIR AHMED
PRIMARY EXAMINER**